

Application No. 09/538,483
Amendment Under 37 C.F.R. §1.116

REMARKS

Claims 1 - 20 are pending in the present application. By this Amendment, claim 1 has been cancelled and claims 2 – 4, 6 and 7 have been amended. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated January 26, 2005.

Examiner Interview:

The courtesy extended by Examiner Nguyen to Applicant's representative, Tom Brown, during the April 12, 2005 telephonic examiner interview is gratefully appreciated. The substance of such interview is incorporated into the following remarks.

As to the Merits:

As to the merits of this case, the Examiner maintains the following rejections:

- 1) claims 1, 2, 3, 8-13 and 18-20 stand rejected under 35 USC 102(e) as being anticipated by Shu (U.S. Patent No. 5,838,885, of record); and

- 2) claims 4, 5, 6, 7 and 14-17 stand rejected under 35 USC §103(a) as being unpatentable over Shu in view of Ancin (U.S. Patent No. 5,956,468, of record).

Each of these rejections is respectfully traversed.

With regard to Applicant's argument that Shu fails to disclose or fairly suggest the claimed feature that each amended signal is determined based on information about the monochrome image for one color, in addition to information about the monochrome image of another color, the Examiner takes the following position:

Shu teaches the exact nature of the different signals (amended signals such as Cb, Yn, Mb, Kb) generated by the amendment unit of the present invention. It should be emphasized that each amended signal is determined based on information about the monochrome image for one color (C, M, Y), in addition to information about the monochrome image of another color (K).¹

However, the Examiner is mis-characterizing the teachings of Shu. More specifically, the Examiner's assertion that each amended signal is determined based on information about the monochrome image for one color (C, M, Y), in addition to information about the monochrome image of another color (K) is not supported by Shu's disclosure.

Instead, Shu describes that "the black value is determined independently of color-component values" and "the positions at which black ink is to be deposited are determined independently of the commands for colored ink" (Abstract, for example), which is contrary to the configuration recited in claim 2 of the present invention that "a signal for generation of a monochrome image ... according to information about a monochrome image and information about a monochrome image of another color".

¹ Please see, lines 5-8, page 3 of the Action.

That is, in the under-color-removal operation 59 of Fig. 6, which is shown in more detailed in Fig. 7 of Shu, a fine-value-resolution black value K is determined in block 74 based on the taking of the minimum value, V_{min}, of the three color-component values C, M and Y. However, as can be clearly seen in Fig. 7, the outputted fine resolution color-components C', M' and Y' are simply not determined based on the fine-value resolution black value K. In addition, as shown in Fig. 6, the fine-value resolution black value K is not inputted into the threshold selection 70.

Moreover, the error-diffusion-type half-tuning operation 68 of Fig. 6 merely generates corresponding binary values C_B, M_B, V_B, and K_B. That is, as discussed in col. 5, lines 32-37 of Shu, each binary value is determined by comparing a corresponding fine-resolution value with a quantization threshold. In error-diffusion-type half-tuning, the fine-resolution value that is compared with the quantization threshold results from adjusting a corresponding input high-resolution value C'', M'', Y'', or K by “errors” accumulated from half-tuning at nearby pixels.

As such, it is respectfully submitted that Shu fails to teach or fairly suggest that the binary value of C_B, M_B or Y_B is determined based on the fine-resolution black value K.

Furthermore, Shu does not disclose the configuration that “the color signal is amended based on a correspondence in color and arrangement between pixels forming the multi-color image”. In Shu, the locations at which black ink is to be deposited are determined in accordance

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with the binary black value (Abstract), which is not arranged to amend the color signal based on a correspondence in color and arrangement between pixels forming the multi-color image.

In view of the aforementioned amendments and accompanying remarks, it is respectfully submitted that the claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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